

## Anti-4E-BP1 Mouse mAb

Purified Recombinant Mouse Monoclonal Antibody

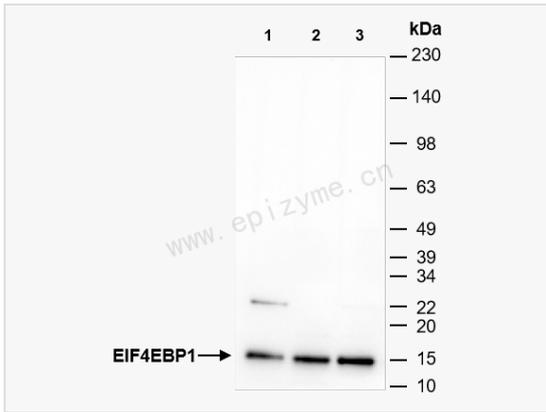
Catalog # M014611

### Product Information

Application	WB, IHC-P/IF (Tissue-P), IF (Cell)/ICC, ELISA
Reactivity	Rat, Human
Dilution	WB 1:1,000~1:2,000; IHC-P 1:100~1:200; IF 1:100~1:200
Host	Mouse
Clonality	Monoclonal
Clone No.	95H34L20
Isotype	IgG
Label	Unconjugated
Immunogen	Recombinant protein of human 4E-BP1
Format	Affinity purified monoclonal antibody supplied in PBS with 0.01% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-4E-BP1 Mouse mAb [95H34L20] is for research use only and not for use in diagnostic or therapeutic procedures.

### Protein Information

Synonyms	4E-BP1, 4EBP1, 4EBP1_HUMAN, BP 1, eIF4E binding protein 1, eIF4E-binding protein 1, Eif4ebp1, Eukaryotic translation initiation factor 4E-binding protein 1, PHAS-I, PHASI, Phosphorylated heat- and acid-stable protein regulated by insulin 1.
Calculated MW	Calculated MW: 13 kDa; Observed MW: 13 kDa
Uniprot ID	Q13541
Gene ID	1978
Background	4E-BP1, also known as Eukaryotic Translation Initiation Factor 4E-binding protein 1, is a highly conserved small protein that belongs to the eIF4E-binding protein family. It is a key regulator of translation initiation and acts as a negative regulator of the eIF4F complex. In its non-phosphorylated state, 4E-BP1 binds to eIF4E, preventing the assembly of the eIF4F complex, which is essential for the initiation of protein synthesis. When phosphorylated, particularly at specific serine and threonine residues, 4E-BP1 undergoes a conformational change that reduces its affinity for eIF4E, thereby allowing the eIF4F complex to form and promote translation. The phosphorylation of 4E-BP1 is regulated by the mTOR (mechanistic target of rapamycin) signaling pathway, which plays a crucial role in cell growth, proliferation, and survival. 4E-BP1 is involved in various cellular processes, including neuronal survival, neuroprotection, and the maintenance of mitochondrial homeostasis. It has been implicated in the protection of neurons from misfolded protein stress and neurodegenerative diseases such as Parkinson's disease.



Western Blot - Anti-4E BP1 Mouse mAb [95H34L20]

All lanes: M014611 at 1:1,000 dilution

Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates

Lane 2: HepG2 (Human hepatocarcinoma epithelial cell) whole cell lysates

Lane 3: HCT116 (Human colorectal carcinoma epithelial cell) whole cell lysates

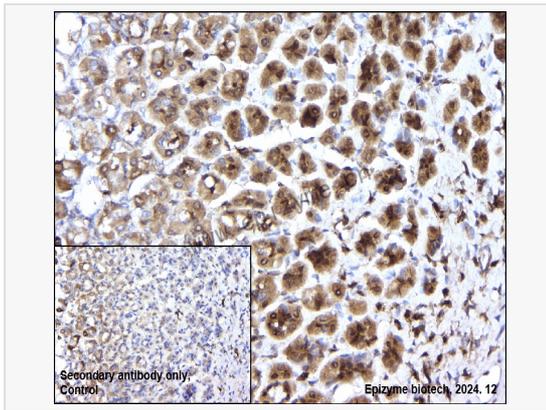
Lysates/proteins at 10 µg per lane.

Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP Conjugated (Cat. No. LF101) at 1:5,000 dilution

Predicted band size: 13 kDa

Observed band size: 13 kDa

Developed using the ECL technique (Cat. No. SQ201).



Immunohistochemistry - Anti-4E BP1 Mouse mAb [95H34L20]

Sample: Paraformaldehyde-fixed, paraffin embedded rat stomach tissue

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.

Primary antibody: M014611 at 1:200 dilution

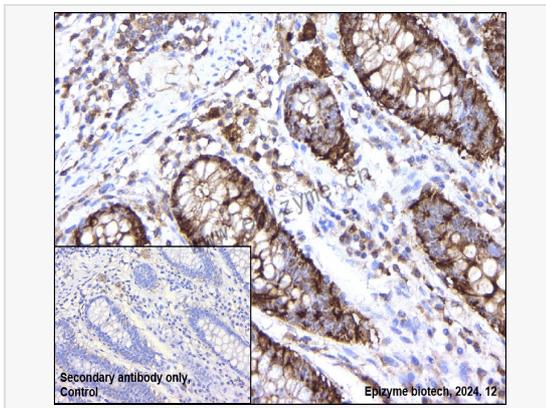
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP conjugated at 1:1,000 dilution

DAB was used as the chromogen.

Counter stained with hematoxylin.

Positive/negative staining were presented.

Only the secondary antibody was used as the negative control.



Immunohistochemistry - Anti-4E BP1 Mouse mAb [95H34L20]

Sample: Paraformaldehyde-fixed, paraffin embedded human colonic cancer tissue

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.

Primary antibody: M014611 at 1:200 dilution

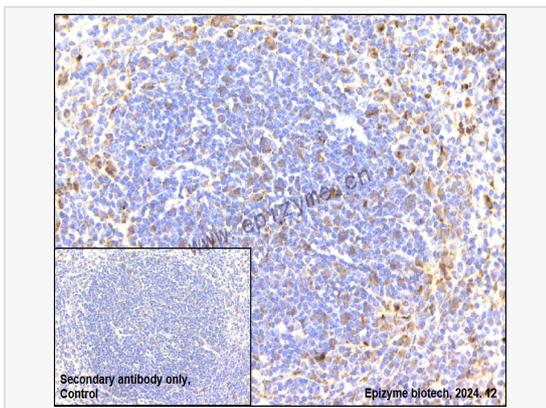
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP conjugated at 1:1,000 dilution

DAB was used as the chromogen.

Counter stained with hematoxylin.

Positive/negative staining were presented.

Only the secondary antibody was used as the negative control.



Immunohistochemistry - Anti-4E BP1 Mouse mAb [95H34L20]

Sample: Paraformaldehyde-fixed, paraffin embedded mouse spleen tissue

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.

Primary antibody: M014611 at 1:200 dilution

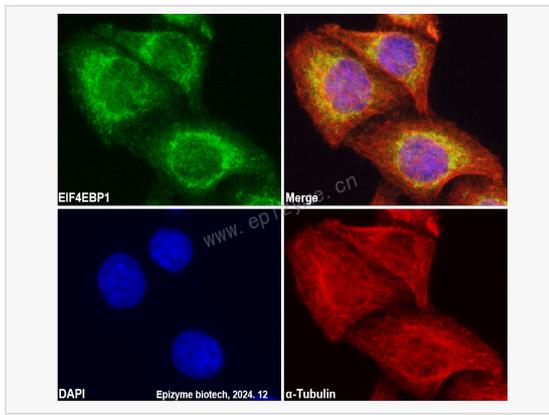
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP conjugated at 1:1,000 dilution

DAB was used as the chromogen.

Counter stained with hematoxylin.

Positive/negative staining were presented.

Only the secondary antibody was used as the negative control.



#### Immunofluorescence - Anti-4E BP1 Mouse mAb [95H34L20]

Sample: HeLa cells

The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.5% Triton X-100 for 10 minutes and then blocked with 5% BSA in 0.1% PBS-Tween for 0.5 hours.

Primary antibody: M014611 at 1:100 dilution and  $\alpha$ -tubulin Rabbit Monoclonal Antibody (Cat. No. LF213) at 1:100 dilution

Secondary antibodies: Goat anti-Mouse (488) at 1:1,000 dilution (shown in green) and Goat anti-Rabbit (555) at 1:1,000 dilution (shown in red)

Nuclei were stained with DAPI (shown in blue).